Webinar – What is My State Best At? Selected Findings from 2017 Economic Census
November 18, 2020

Coordinator: Welcome and thank you for standing by.

At this time, all participants are on a listen-only mode until the question and answer session of today's conference. At that time, to ask a question, press Star and the number 1 on your phone and record your name at the prompt.

This call is being recorded. If you have any objections, please disconnect at this time.

I will now turn the call over to Andrew Hait. Thank you. You may begin.

Andrew Hait: Great. Thank you so much.

So my name is Andy Hait. I'm an economist at the US Census Bureau at our headquarters office in Maryland. And I want to welcome you all this afternoon, to the webinar that we are doing that features data from the 2017 Economic Census Geographic Area Statistics.

I want to thank you all for taking time out of your busy schedules to attend today's webinar. And right up front, I am going to apologize in advance for any noises you might hear. One of the joys of working at home is when your neighbor decides to mow his lawn at the time that you're doing a webinar, or blow some leaves, or other wonderful, joyous things.

So again, today's webinar is going to talk about the local area data that we've been releasing as part of the economic census. We are going to be presenting some selected findings from the 2017 Economic Census Geographic Area

Statistics. I'm going to be sharing some sorts and other kinds of rankings that I pulled from the data.

And the data that I'm going to be sharing with you all is going to be shown at the sector and the state levels. I want to make a point, though, of saying that the data that we have in the Economic Census Geographic Area Statistics is also available at the three, four, five, and six-digit North American Industry Classification System or NAICS levels.

And it is also available geographically, from the state level down to metros, counties and even places. As a reminder to everybody, a place in the economic programs, is a city, town, village or borough, that has at least 2500 populations or 2500 jobs.

The goals for today's webinar are: number one, to help raise awareness of the data that's available through the economic census. This webinar is going to complement an America Counts story that I released back on November 5th (I provided the link to that story here on the screen) that talked about these data.

But my other goal of this presentation is really to encourage you tall to explore these data further. As I was pulling the information for this webinar, I was curious to see just what is going on in each of these states. For example, when I saw that a particular sector was very important in a certain state that I was interested in, I wanted to know which industries within that sector are the key industries.

If healthcare is really important to the State of Maryland, is that healthcare form a doctor's office perspective or is that healthcare from a hospital's perspective? This is the top employer. Also, I was really curious about geographically, when we talk about a state being number one ranked in a

particular sector, is that sector big across all counties in the state or are there certain counties that really dominate?

There certainly are some states where the economy is almost evenly distributed across each of the counties. And then we have other states, perhaps like New Mexico, where you have large concentrations of population in certain counties and much more rural areas in other parts of the state.

So as we walk through these data I do want to encourage you all to go in and explore the data later to see just want exactly is going on at the more detailed industry levels and at these more detailed geographies. In my rankings I'm going to be providing two sorts of rankings - first, we're going to talk about how does my state or how does a state compare to other states at the national level.

What are the top states in the United States in terms of certain things like establishments, employment, payroll and sales? And how do those states compare to other states? But also I want to talk about data from the sector perspective. What are the sectors that are the most important to my state? And we're going to talk a little bit about the sectors that were the biggest in 2017 and sectors that have also seen the largest growth from 2012 to 2017, economic census year.

Now one quick point I want to make before we move into the actual presentation, is to talk about why are we talking about 2017 data. The 2017 Economic Census is currently being released and in many ways the economic census provides the most detailed statistics that we have on the US economy, available from the US Census Bureau.

When we think about the rankings of sectors in a certain state or what states, how they rank in terms of others, very often those rankings do not change dramatically from year to year. The industry sector that may be ranked number one one year could move to position two or three in a particular year, but the overall rankings often don't change dramatically.

So, while these data we're going to be talking about are a little "old," they often will represent even the current reality that we are seeing. Now, of course, under the pandemic, certain sectors of our economy have really taken a hit more than others, and for these, of course, you would want to look at the more detailed kind of indicator surveys to see how are those sectors doing.

But those economic indicator surveys are primarily only shown at the national level because Census is really pretty unique in that they give full access to the full set of data on establishment employment, payroll, and some measure of output, down to the most detailed geographies and the most detailed industry levels available.

So in a lot of ways the economic census really continues to be the best source of these kinds of rankings. Now before we get started, of course I want to remind everybody that Census Bureau is much more than just simply the decennial census. We conduct more than 130 monthly, quarterly, annual and periodic censuses, surreys and programs each and every single year.

As you all know, we just finished collection of the data for the 2020 decennial census, but every single year we conduct the American Community Survey which is a fabulous resource that provides demographic, socioeconomic and housing data, down to the census tracts and even the block group level.

So it's a great resource for businesses to use to understand their potential customers of their business, or economic development officials and Chambers of Commerce staff, to understand how their economy and how their populations are changing in their service area, and scores of other types of uses.

In addition to those demographic programs though, we conduct 58 business surveys and the pyramid on the right, is a good way to think of those business surveys.

The top of the pyramid is our monthly and quarterly surveys. We do 17 economic indicator programs in our economic directorate at the Census Bureau. Those surveys primarily are shown only at the national levels and produce a fairly limited amount of detail as you can sort of tell by the size of the pyramid.

But they are also baselined and benchmarked back to those more detailed annual programs which are then baselined and benchmarked back to the five-year economic census. So, in many ways, our ability to get a complete full measure of all employer businesses in the United States, during the economic census, is critical to our ability to publish data annually, quarterly and monthly, in these other sample programs.

The economic census then is the most detailed economic program that we do at the Census Bureau. It covers nearly every two to six-digit North American Industry Classification System code or NAICS code.

There are a few exclusions. We do not publish data on farms because the Department of Agriculture National Agricultural Statistics Service or USDA-

NASS is responsible for conducting the census of agriculture and the other agriculture programs.

We don't cover data on colleges and universities because they are covered by the National Center for Education Statistics. I've provided the links to the list of exclusions, but in general terms, about 98% of all the businesses in the United States are covered by the economic census.

Geographically this is also one of our most detailed programs as well. It does publish data down to the county and place levels. Some of you who are long term users of economic census data may notice that I don't have on this slide zip codes. Historically, we have published the economic census by zip code. For 2017 we dropped the zip code level data, but there is no reason to fret. We actually are continuing to publish the zip code level data annually in the zip code business patterns program.

And in many ways, the ZBP data is as good if not better than what the zip code data was in the economic census, because you get it every year. The economic census is also our most detailed program in terms of the other dimension that we publish. At the beginning of December we will be releasing the Establishment and Firm Size reports, which are the reports that show data broken out by business size.

This is a real wealth of information that helps researchers understand the importance of small businesses. And actually I'm going to be doing a webinar on December 8th to talk about that business size data. It's the most detailed program in terms of the data variables being shown today. We are going to be focusing on employment, establishment, payroll and some measure of output whether that be sales, shipments, receipts or revenue. But there are a host of other data variables shown as well.

Tomorrow we will be releasing our NAPCS based - our North American
Product Classification System based - product line data. These are the
detailed statistics that talk about what types of products and services are
provided by businesses in the United States. So when you think about the
sales of a grocery store, we publish the total sales of grocery stores as part of
our regular statistics, but we would also then publish a detailed breakout of the
different types of products and services provided by grocery stores.

So we would publish data for example, on baked goods, on canned goods, on
produce, poultry, things along those lines. These product line data are very
unique that are published in the economic census. It is the only program at
Census that publishes comprehensive product line data for all sectors or nearly
all sectors of US economy.

So the data will be going live tomorrow. There will be a press release on it
and I will be doing a webinar on the NAPCS data on December 1st. So if you
have not already bookmarked and put that into your calendar, please go ahead
- 2:00 pm Eastern time on December 1st.

These data are being released on our new Data.Census.gov platform, but
we've also just recently added them to Version 3.2 of Census Business Builder
and some more data will be added in the December/January 3.3 release of
Census Business Builder.

This slide provides a little bit of information about that release schedule. As
you can see on the slide, we started releasing data from the economic census
in September of last year in what we called the First Look Report. In August
of this year we completed the Geographic Area Statistics, which is the data
we're going to be featuring today.

And then tomorrow is when we again, have NAPCS data, those product statistics. And on December 3rd we'll have the data on the establishment and firm size. So there's still more data coming. We have lots more information coming. The miscellaneous subject reports come out later on next year. That'll be great.

And yes, we will still continue to update Census Business Builder, which continues to enhance the data that's in there, the new functionality.

In fact, I'm going to be doing a webinar in December on the new release of CBB because there are some really exciting new features. Just to give you a little tiny bit of a hint, we are going to be doing multi-variant mapping in Census Business Builder. You'll now be able to view more than one variable on the map at a time.

And when we think about comparing the 2017 economic census data back to the 2012 economic census and going back further than that, there are a couple of things that you always need to keep in mind when you're doing that comparison. And I'll - this is sort of my opportunity to get up on my soapbox a tiny, tiny bit.

Any time you're doing time series comparisons with any data, not just Census Bureau data but also data from other sources, you always need to make sure that the thing that you're comparing is comparable. As many of us know, the boundaries of geographic areas change constantly. We haven't added a state to the United States in a long time, but the boundaries of counties, places and metropolitan areas do change and often those changes can actually affect the comparability of the data for that geography over time.

For example, the town that I live in, in Maryland, had a boundary change and that new boundary now includes about 40 businesses that have been in that area for years, maybe decades, but were never considered part of the town that I live in. And they - when they annexed if you will, that area, those businesses are now included in the data for my town.

So if I was not paying attention to that boundary change I might think that the economy of my town had increased quite a bit when in fact, a large portion of that increase is due to boundary change, not real economic growth. At the Census Bureau, we take this pretty seriously, and we've got a lot of resources available to you to help you understand those changes and so that you can make the decision about whether or not those data are comparable or not.

I have included the links to our geographies page where you can go in and learn about those geographic area changes. We also have a web application called TigerWebEcon, that allows you to view those boundary changes on a map.

In addition though, there are also industry classifications system changes. When I did the comparisons today that you're going to see in today's webinar, I did those at the two-digit NAICS sector. And at the two-digit sector there were no changes from 2012 to 2017 NAICS.

However, within the two-digit NAICS sectors, there were a number of changes. In fact, six sectors under the NAICS classification system, had some type of industry change either where industries were split, where industries were combined, or where pieces of industries were pulled out and moved into other industry.

So again, when you're making those NAICS comparisons over time, you want to make sure that you're comparing something that's comparable. We've got those resources available on our NAICS Web site, which again, I included. Now the last two things I want to mention about changes in the economic census, the first is of course that we have moved to a new dissemination platform.

We are publishing all the data for 2017 econ census on the new Data.Census.gov platform. This platform replaces American Fact Finder and I will tell you, as someone who was involved in the early design of this platform or at least the functional requirements for it, I have real hopes that this platform will really be able to do some amazing things in the future.

The basic way that they designed the platform, allows users or will allow users to do things that they could never do in American Fact Finder. So yes, I know it's a bummer that you lost your beloved American Fact Finder. I will say I bemoaned it for a short while too, maybe more than a short while. But Data.Census.gov is here to stay and I would really encourage you all to check it out.

The other bullet that I have highlighted here in red is sort of the bummer part of the presentation. As many of you know, our data are all subject to Title 13 of the US Code Regulations. Title 13 says that we cannot publish data that would disclose the identity of individual respondents. Whether those respondents are people, households, or whether they are businesses, the rule still applies.

And historically, we've done a lot of work to make sure that the user could not take our data and understand and identify individual businesses. Now as many of you know, our data, the data that we actually publish, includes data

that was reported to us by businesses, but it also is commingled with data that we received from other administrative sources, including data from the Internal Revenue Service.

We use the IRS data as a proxy for non-response. So when a business does not respond to the economic census, we use the IRS data as a replacement for that response data.

Starting with the 2017 economic census and starting with the 2017 year for a lot of our other programs, we are now bound by the new IRS disclosure rules that are having an impact on the data that we publish, especially when you're looking at data for smaller states -- I picked on New Mexico earlier, I'll pick on them again -- when you look at states that are small, in terms of their economy, you will find more cases where we've had to suppress data for small geographies than we've ever had before.

The tip for you all is that you should always start as broad as you can in terms of geography and in terms of industry. So today we are looking at two-digit NAICS sectors by state.

As we drill from state down to metro, county and place you will see an increasing number of suppressions of their data, of the data for those geographies. And same thing as you drill from the two-digit sectors to the three, four, five and six-digit NAICS codes, you will see an increasing number of suppressions.

Large states are obviously affected less by these new disclosure rules simplify because there are more businesses in those states. It's really those states and those geographies and industries, where you have a relatively small number of businesses even at the state level where you sometimes see suppressions.

So as I mentioned, we released beginning of November, an America Counts story, that talked about the data from the economic census. In that story we highlighted the dominance of California in many of the sectors of the economy. You see that dominance in figure 1 and in figure 2 here on this particular slide.

We also then talked about that it's not all California, that there are other states that also did very well in the 2017 economic census and in the change between 2012 and 2017.

Figure 3 from the story shows some information about the sectors where Texas led the nation in employment growth.

We also talked about some other states. The District of Columbia happens to be a state that is really sort of somewhat surprisingly and somewhat not surprisingly, very dominant in certain sectors of the economy. We provide a little bit of information about that.

But we also then talked a little bit about the sectors themselves.

I know we often think of our economy as being primarily service based, but there are still states where manufacturing is ranked number one. Figure 5 from the American Counts story, provided some information on that.

And finally, in Figure 6 here, we talked about the healthcare sector.

This sector happens to be a huge sector in the US economy. Today we're going to be drilling down into this in a little bit more detail. So, let's first start about how does each state compare to others at the national level. So, we

think about the number of establishments. And these are individual business locations and yes, the economic census does only publish data on employer businesses. Non-employers are not covered by the economic census.

We can clearly see the dominance of California in the US economy. It is by far our largest state in terms of population and California actually dominates in 16 of the 18 sectors covered by the economic census. The only two sectors where California is not ranked number one in the nation, is the mining, quarrying and oil & gas extraction sector, and the utility sector, those two sectors. Texas is actually ranked number one in those two sectors.

An establishment again, is a business at a single physical location. And publishing establishment-based data is a key hallmark of the economic census because doing that allows users to better understand the businesses that are physically located in their particular state or their area, not just those that are potentially headquartered there.

When you think about a company-based survey where all of the employees, all of the revenue of that business would be tabulated where that company is headquartered, that would be a very different look at the US economy. You'd see this huge number of businesses in Delaware for example, where they may have manufacturing businesses or other locations scattered all over the country.

We do conduct some programs at the Census Bureau that are company or firm based. And we even publish some firm level data in the economic census. But at its heart, the economic census is an establishment-based survey and that's what allows us to polish this really rich industry and geographic level data.

California is also ranked number one when you think about the change in number of establishments. But its dominance is not nearly as great. Only 11 of the 18 sectors in terms of the growth of businesses between 2012 and 2017, happened in California.

As you can see on this slide, Texas led the nation in the mining, wholesale and management of companies and enterprises sectors. Those three sectors saw the biggest growth in number of businesses in Texas. In North Carolina it was the utility sector that was ranked number one in terms of the establishments. North Carolina was ranked number one in the nation.

And finally, Florida - I apologize for the yellow, very hard to read. Florida was actually ranked number one in the administrative and support and waste management and remediation services, in the manufacturing sector which I personally found quite interesting. And in the retail trade sector.

Now when we think about the dominance of certain sectors to certain states, to me in a lot of ways, these dominant sectors speak to how resilient or not, a particular geography, a particular sector is to that economy. A state that is very heavily invested in a certain sector, if that sector is then impacted by a shock such as a pandemic, the potential impact to that state might be bigger than a state that is more evenly distributed across different sectors.

So understanding the rankings of sectors by state is very important to think about how growth of our economy is not always happening just in these large states. Now this next slide talks about employment. And once again, we see that California really leads, in this case again, 16 of the 18 sectors.

But again, we see that two other states actually were ranked number one when it comes to the number of workers. Texas was ranked number one again in

the mining, quarrying, oil & gas extraction sector. As you can probably guess and yes, I did check this myself, the biggest industry or subsector within that sector, is of course oil & gas extraction.

But I was surprised to see that there is actually still a good amount of mining activity and quarrying activity occurring in the state of Texas. More interestingly though, I saw that Florida was ranked number one in terms of the administrative and support and waste management and remediation services sector.

Now having a family member who lives in Florida I was really curious about that. One of the industries that is very, very dominant in Florida, is the Professional Employer Organization or PEO industry. These are employee leasing companies. They happen to be very dominant in Florida. And a large share of the employment of the 1.7 million employees that work in this sector in Florida, are in that particular industry.

So again, thinking about the importance of a particular sector to an industry, sometimes that sector and its importance, is distributed across all industries in that sector. When we think about the importance of the utility sector for California, the utility sector not only includes power plants that are powered by fossil fuels, but it also includes power generation facilities that are powered by solar, wind, geothermal, and biomass.

And California leads in this utility sector, in each of the sectors. So again, thinking about how these states are ranked and the different things that are dominant in that state. In terms of change in employment, you'll notice again, California shown in blue, does actually account for a fairly substantial portion, ten of the sectors are - California's ranked number one in those ten sectors, in terms of the increase in employment between 2012 and 2017.

But a few other states kind of popped in here as well. I was really intrigued to see that Wisconsin was actually ranked number one in the increase in employment in the mining, quarrying, and oil & gas extraction industry. I would not normally think of Wisconsin as being a state that would be heavily involved in that sector. But apparently, that's the state that actually saw the most increase in employment in that sector.

Texas is ranked number one in utilities, wholesale, finance, professional scientific and technical services, and educational services sector. And yes, one of the notes I just saw pop up, was asking about architectural businesses, architecture businesses. Yes. They are counted as part of the professional, scientific, and technical services sector.

So this big increase in Texas in employment in that sector, it'll be interesting to see how much of that increase in that sector, that 96,000 employee increase, was due to that particular industry.

Michigan, I guess you could say maybe happily, is ranked number one in terms of employment increase for the manufacturing sector, the green bar here. We typically think of Michigan as being a big manufacturing state. And again, it'd be very interesting to see this increase in employment in manufacturing, is this motor vehicle manufacturing or is it - and is it all in motor vehicle manufacturing, or are there other manufacturing sectors, industries in Michigan, that also saw a big increase?

And finally, once again, we see that Florida really dominated in terms of the change in employment between 2012 and 2017 in that admin and support and waste management remediation services sector. On the previous slide we saw that they were the top employer with 1.7 million employees in that particular

sector. That number is up a little bit more than a half a million employees between 2012 and 2017.

PEOs, professional employer organizations, are businesses that lease employees to other businesses. So if a manufacturer for example, that sees major seasonal swings in their employment, to deal with those seasonal swings they could hire employees and then let them go, and then hire them back and then let them go. Or they could actually work with an employee leasing company and essentially lease the employees for that period of time, that they need that spike of employment.

These businesses are very common, very popular in Florida. I'm not quite sure why they centered themselves in Florida. But it happens to be an industry that is very common in the State of Florida, probably for some tax reasons, and that is probably a big chunk of this 515,000 increase in employment in this industry, between 2012 and 2017. Again, something else to dig into when I have some free time over the holidays.

Now in the economic census we also publish data on payroll. And it's very easy for someone to go in and do an average annual payroll for employment, and I was really sort of curious to see how do states rank when you think about the average payroll per employee in a sector, in that state.

This chart shows in the orangey sort of red color, the national average annual payroll per employment for that particular sector. And then in blue it shows the state that has the highest average annual payroll per employment in that state. I was quite fascinated to see that California only ranked number one in one sector, that is the management of companies and enterprises.

On average employees who work in that sector, earn $134,132, slightly more than the 100 and something thousand that is at the national level. More interestingly, living here in the DC Metropolitan area, I was really intrigued that DC, the District of Columbia, ranked number one in eight sectors - utilities, transportation, real estate, professional, scientific and technical services, educational services, healthcare, art and other services.

Those of you who know anything about the DC area know that this is a fairly expensive place to live. Businesses apparently pay their employees in their sectors pretty well in the DC area, in comparison to the national average. So again, giving DC something to crow about, this is a great place to work if you work in the healthcare sector or in the arts, entertainment and recreation sector.

You're going to earn a lot in the arts, entertainment, and recreation sector in DC, more than double what the national average is for that industry. But again, the question is, is that all industries in the art, entertainment and recreation sector? Or are there certain industries that are really dominant? Looking at change in the average annual payroll for employment, once again DC ranked fairly well, tops in three sectors - transportation and warehousing, arts and entertainment, recreation and real estate rental and leasing.

Those three sectors saw the largest increase in the average annual payroll per employment between 2012 and 2017. But I thought it was even more interesting to see the dominance of the State of Washington in these sectors. Five sectors saw the largest increase in average annual payroll per employment in their sectors. One of them should come as no surprise to any of you who know anything about the businesses that are in Washington State.

The information sector - the average employee - the employees of that information sector in Washington State, earned on average about $40,000 more in 2017 than what they earned in 2012. That sector in that state saw the largest increase, in Washington State.

So again, kind of under - looking at what sectors are really growing the most in each state and how are the workers in those sectors doing?

Now the last category I want to talk about, we talk about state rankings at the national level, is revenue. Sales, shipment, receipts or revenue; the other measures of output that we have.

Once again, California ranks number one in a lot of the sectors, and once again, Texas ranked number one in a couple of sectors as well.

It was interesting though to note that the manufacturing and wholesale trade sectors that were actually big in some other states, happened to be ranked number one in the State of Texas. That makes me then wonder, are there certain industries in the State of Texas within the manufacturing sector, that happen to be high dollar sales or shipment industries that accounted for the fact that the manufacturing sector in Texas is ranked number one?

Some of you know that the manufacturing sector has done very well, a number of fairly large corporations have moved operations to Texas or where their operations - their manufacturing operations in Texas, have grown quite a bit. So again, kind of a very interesting comparison here.

When you look at the change in revenue between 2012 and 2017, California once again, pops up to the top.

But then some other states show up in here. Texas ranked number one in the change in sales, shipments, receipts or revenue for the transportation and warehousing sector; manufacturing though in South Carolina, had a big increase, showed the largest increase.

That made me then wonder what industries, what manufacturing industries within South Carolina, are accounting for the largest share of that manufacturing sector increase?

I think I know what the answer is but I want to dig for more to see what that actually is, and again, speaks to the commitment to a particular state to growing a particular sector of their economy. If that sector is doing well then the state does well.

If that sector has a bad day then maybe the state gets affected more because again, they've put a lot of their eggs into that one sector basket. North Dakota was ranked number one in terms of the increase in revenue in the mining, quarrying, and oil & gas extraction sector.

Those of you who know anything about the mining sector of North Dakota, knows that this sector tends to be affected a lot by price change. And after 2017 we saw some real declines in the average price per barrel of crude oil. So it will be very interesting to see how is this sector still doing in North Dakota.

And then finally, Illinois actually ranked number one in terms of the change in revenue for the management of companies and enterprises sector. This is the sector that includes company headquarters.

Now let's change gears a little tiny bit and talk just for a few minutes about the top sectors in each state. What are those sectors that are most important to each state? So this chart here talks about what sectors are top ranked in terms of the number of businesses. And this should come as probably no surprise to any of you, that the retail trade sector is the top sector in terms of number of establishments in 36 of the 51 states.

Texas is ranked number one in this sector with over 80,000 - almost 81,000 retail establishments in the State of Texas. New York is right behind it in second place. And then you see the tapering off of the retail sector in the other states.

Even in a state like Vermont where the number of retail businesses is much smaller, it is still the number one sector in terms of number of establishments.

Red - the red highlighted bars - are the construction sector. I want to make a mental note to remember this because I was quite fascinated to see that the number one sector in terms of number of businesses, number of establishments, locations, was the construction sector in Washington State -- not other sectors. It wasn't retail and it wasn't professional scientific and technical services, which has the green bars.

The number one sector in terms of number of establishments in California, is the professional scientific and technical services sector. When you think about tall the "tech companies" that are located in California, there's 127,000. That is the number - that is the number one.

I did just see a note pop up about if you were to incorporate the agriculture data into these charts how would the rankings change? In some states they wouldn't change at all. Agriculture in many states is relatively small and

would not rank as the number one sector in the state. But in some states some of the top rankings might change.

We don't actually publish the data on agriculture at the Census Bureau, because the National Agricultural Statistics Service does. But that would be a really interesting project, would be to merge together to look at the agriculture sector and the rest of the economy, to look at the overall economy of a state.

The two black bars I thought were quite interesting. Those are for the healthcare sector.

The healthcare sector in Arizona is the number one sector in terms of numbers of business locations, number of establishments with 18,816. That came as a surprise to me.

And the same thing for Alaska. Alaska was also ranked number one in terms of businesses in the healthcare sector.

I would not have immediately thought about that. That again, makes me think I wonder what types of businesses, what types of healthcare businesses are dominant in terms of numbers of establishments in Arizona.

Now looking at the change in establishments - I mentioned on the previous slide, remember these red highlighted states, the fact that there are four states where construction was the number one sector in terms of numbers of establishments. On this next slide we look at the change in the number of establishments between 2012 and 2017. And these red highlighted bars are once again the construction sectors.

I was really intrigued to see that construction was the number one growth sector in 34 of the 51 states in the United States. I found that just absolutely astounding that that sector was - had grown so much during this period. And especially in California and Florida and Texas which are the top three ranked states.

Professional scientific and technical services are the green bars and you can see that Maryland saw the largest increase, my home state, saw the largest increase in the number of professional scientific and technical services sector businesses. If you've ever driven up the Route 270 corridor, driving away from the District of Columbia up toward Northern Maryland, you'll see a whole host of tech services, biotech firms, etc., that are along that 270 corridor. You can really see that increase when you look at the data.

The black highlighted bars, the six bars are for the healthcare sector. And I was intrigued to see that Minnesota actually was ranked number one in terms of increase in the number of healthcare businesses in that state, followed by Arizona, very closely followed by Arizona.

And finally, those last five bars, the orange colored bars, are for the accommodation in food services sector. Tennessee saw the largest increase in the number of accommodation in food services establishments between 2012 and 2017. Oklahoma, Louisiana, Alabama and Mississippi were ranked next.

Now one of you just asked a question that sort of alluded to that comment I made earlier, about how the mixture of businesses in a state and the growth in those businesses in a state, can have an impact on how "recession proof" a particular state might be? A state that has put a lot of their eggs into a particular sector of the economy, when that one sector of the economy is then greatly impacted by a major shock like a pandemic, like COVID-19, then that

state potentially could be more impacted because they put a lot of their state's economy is based on that particular sector.

Certainly when we think about the accommodation in food services sector, this is a sector that has been most impacted. Sector 72 has seen the largest impact during the COVID-19 pandemic of any sector in the US economy and it's seen the largest decline in the number of businesses. They have seen the largest decline in the employment. And they have seen the largest decline in their sales of any sector in the US economy.

So a state that might put a lot of their growth into this particular sector, might in some respects, really be sticking their neck out and could be impacted. So yes, that's a really interesting economic thing to think about.

Now we've been talking about each of these different sectors. And what I thought would be very interesting to provide here, would be a relative comparison that looks at how the number of establishments by sector, varies or in some respect, doesn't vary much across the nation.

So just for giggles here, I pulled out the share of businesses by sector at the national level, United States, that's the first bar the light blue bar. And then I worked my way around the country starting in the Northeast with New York, moving to the South with Florida, and then jumping across the country to California and then moving back up the West Coast to Washington State.

And when you look at the mixture of businesses, of establishments in each of these sectors, in each of these states, you see that really from state to state, they are often not very different. The relative mix of businesses don't vary that much. But I will say you do see some really interesting outliers.

So for example, we were talking a few moments ago, about how the construction sector in Washington State saw a big increase. Look at the share of establishments in the construction sector in Washington State, in comparison to New York, Florida and California. It is substantially higher than the 9.4% that is the average for that construction sector across the entire United States.

And this made me then say well, I wonder how that distribution of businesses by sector, varies in a couple of key selected sectors. So the first one that I picked on was the healthcare sector. We saw earlier how healthcare was a key top employer sector in the United States. So I said let's take a look at how the healthcare sector varies from state to state, in terms of the share of all establishments that are in this particular sector.

Nationally, about 11.75% of all establishments at the national level, are in the healthcare sector. And you can see that that number ranges between about 13% down to a little less than 10%. But you do have a couple of outliers here. In West Virginia, 14.21% of their businesses in the state are in the healthcare sector. We don't often think of West Virginia as being a state that has a strong healthcare sector.

But in this case you can see a very large percentage of their businesses in the state, a larger percentage than the national average, are in the healthcare sector. And at the opposite extreme we have North Dakota where only 8.76% of the businesses are in the healthcare sector.

When we think about economic opportunity and the places where certain types of businesses are needed, I would argue that any of the states to the right of the national average, are ones that are ripe for opening the healthcare

business. Because they have less than the national average in terms of the total share.

On the construction sector we saw a similar kind of thing, even more exaggerated. Nationally, about 9.4% of all establishments are in the construction sector, but you look at the states like Idaho and Montana that account for over 15% of the businesses in the state are in that one particular sector. I found that really quite fascinating.

I wanted to then dig into the data for Idaho and Montana, to see what types of construction businesses are these in? Are these residential construction businesses or are these commercial, industrial, institutional? Or are these heavy construction? It would be really interesting to see where is that construction industry doing so well and has become such a large share of the economy in those two states.

At the opposite extreme you have the District of Columbia. For any of you who have ever been into DC, you probably know that there are very few construction businesses based in the District of Columbia because most of the construction that is done in DC is done by businesses that are located outside of the District of Columbia. Only 2% of all businesses in the District of Columbia are construction sector businesses.

Changing gears to the professional scientific and technical services sector, again another one that seemed really interesting when we were looking at that. We again see some really interesting comparisons. The national average is about 12.04% but we see outliers like the District of Columbia are almost 26% of all businesses in the District of Columbia are in this particular sector.

Now you all can probably think of all of the consultants and the engineering firms and the architecture firms and other types of technical businesses, that are physically located here in the DC area. I expect that a lot of them would be in Northern Virginia, but apparently a lot of them are in the District of Columbia.

Again, this speaks to the commitment of DC to this particular sector of the economy, as being a key part of their economy. If something were to happen to this particular sector, these businesses in the District of Columbia, might be impacted more by those businesses not doing quite as well. At the opposite extreme we have North Dakota and South Dakota where a fairly small percent, where about 7.6% of the businesses are in this particular sector.

And then finally, we have on slide 26, or not finally, we have the retail trade sector. You see this - we all know that this sector has been impacted quite a bit by the Coronavirus pandemic. Nationally about 14% of all businesses are in the retail trade sector. At the far right extreme we once again, have District of Columbia.

Many of you know that most DC residents don't go shopping for retail in the District of Columbia. They drive into suburban Maryland or into the Northern Virginia to do their shopping. Only 7.76% of all businesses in the District of Columbia are retail businesses.

Where on the opposite extreme, Mississippi and Alabama are heavily retail based states. About 20 - almost 21% of all businesses in the state of Mississippi are in the retail sector.

Now the last slide that I have here, before - or actually second to last slide where have here, talks a little bit about employment. We've talked about

establishments, now let's look at employment. And once again, we see that dominant employment across the vast majority of the states, 41 of 51 states, is in the healthcare sector.

California, over 2 million workers work in the healthcare sector in California. They account for the largest number of workers of any sector in the state. New York is ranked number two and Texas number three. Again, big states you would expect large numbers of healthcare workers.

It was somewhat interesting to me though, to see that the manufacturing sector is the top employer in both Wisconsin and Indiana. Just in March my wife and I purchased a travel trailer. It has been a lifesaver for us during the COVID-19 pandemic, giving us the ability to escape our home while still staying socially distant and being safe. Our trailer was built in Indiana. So thank you, Indiana, for the very powerful - very strong RV industry.

The green highlighted bars are the retail sector. In Utah and New Hampshire, those two sectors - those two states, retail trade is the number one employer. The yellow highlighted, again I apologize for that very pale color. I was running out of colors to choose. Virginia and the District of Columbia, both are very dominant states in terms of employment in the professional scientific and technical services sector.

470,000 workers in the State of Virginia work in that particular sector. It'd be very interesting to look at the distribution of those workers geographically. Are they primarily clustered in the Northern Virginia area, as I would probably suspect, or there are also a lot of folks that work in this sector across the state.

And then finally, the last two sectors - the administrative and support, waste management and remediation services sector we've already talked about this. Florida, over 1.7 million workers work in this sector in the state of Florida. And then in the far-right columns we see two very tourism focused states, Nevada and Hawaii, where the accommodation and food services sector is the number one employer.

When I think about states that have been most impacted by the business closures that have happened during COVID-19, I think a lot about Nevada, a state where you have a very large share of their workforce that work in some of the businesses that have been most impacted by closures. The same thing for Hawaii. Of course they have paradise, so let's - there's something to be said for that.

And then finally, the last slide here today, is talking about the distribution of sales. Wholesale trade sector is typically the sector that has the highest output, the highest sales of any sector in the US economy. You can see Texas and California are ranked number one and two in wholesale trade. In this case, 32 of the 51 states this is the largest sector.

But once again, we see this very interesting thing where manufacturing, as we pointed out in the America Counts story, is the top sector in terms of shipments, in a number of states -- Ohio, Indiana, Louisiana, Wisconsin, South Carolina, Alabama, Kentucky, Iowa, Mississippi, Utah, and West Virginia, manufacturing is the top sector in terms of shipments in that state, in terms of output of businesses in that state.

So that was a very quick run through, some key selected statistics for some key pointers. I do want to tell everybody that there are more data coming out

from the economic census. I already teased you a little tiny bit that tomorrow we're going to be releasing those product line data.

Again, I would encourage you all to go in and explore these data more. I know I sort of have my work cut out for me during my holiday next week, to go in and actually do that.

I did just see a note posted about, "Are we going to post the PowerPoint file?" Yes. The recording and the transcript and the PowerPoint presentation, and if you would like, the Excel file that contains all of the data that I downloaded, will be posted up to our webinars page for you to go in and actually further manipulate the data. I would really encourage you all to get in there and smartly drill down to look at those more detailed levels.

Now the last point I want to make today is that while the data we talked about today was for the 2017 economic census, we do publish data annually, quarterly, and monthly that can be used to supplement these data. And I would definitely recommend that you look at these other data products to see what's happened in the national and state economies since 2017.

I think you will see that some sectors have had very little change in terms of their overall rankings, and other ones have change quite a bit, certainly in the last nine months.

Again, getting on my soapbox, I would encourage you all to please use the resources that we have at Census, to understand comparability of geography and industry changes over time, so that when you are making comparisons of data form no matter who the data are from, that you are making sure the data are comparable.

Data.Census.gov - I want to encourage you all to learn how to use it. And certainly just send us your feedback on it.

I know a number of you who I saw who are attending today, have provided feedback on Data.Census.gov. I kind of annoy them all the time. But it's very important that you do provide that because you are helping to shape what this application does, and we want you all to promote its use with your colleagues as well.

And finally, from an admittedly selfish perspective, Census Business Builder, my personal baby, is providing access to some of the 2017 economic census data as well as a lot of other data. And yes, we are adding more data from the economic census to Census Business Builder in the next few releases.

So with that, I am ready to actually start taking some questions. I know Greg, we've been having - I'm on with my colleague, Greg Pewett. I've been trying to keep up with the chat questions as they've been coming in. But Greg, if you want to quickly look through the chat and see if I missed any particular questions or comments that people had, that would be fantastic.

Gregory Pewett: Sure thing Andy. Let me just scan through here. And, you know, if I mentioned one that you have already mentioned, we can go past that because I know you've been…

Andrew Hait: Sure.

Gregory Pewett: …checking those out as you could. Let's see.

And to the audience, if I miss yours, my apologies. Feel free to send your question in to the contact information on the screen there.

But there's one. Could the PEOs in Florida be related to the cruise industry?

Andrew Hait: Oh, the short answer is probably not. Because a lot of the employees of the cruise industry are actually paid employees of those businesses. They are typically not leased employees.

PEOs tend to focus on manufacturing workers and workers in other sectors. Cruise lines would not probably be one of those sectors, one of those industries where PEOs would be important. Cruises, cruise lines are actually in a completely different industry.

I did just see someone posted a chat note about my reference to the agriculture data. The US Department of Agriculture, National Agricultural Statistics Service, USDA NASS, is the source - the main source of data on the agriculture sector.

If you Google USDA NASS you will come to their site. They've got a pretty nice data tool that'll let you go in and look at the agriculture data and you can actually download that information as well.

I did also see someone pop up a question about the military. So in that list of 18 sectors that you saw that we publish data for, two of the sectors that we don't publish data for, are agriculture - we already talked about that one, and government, NAICS 92. So the vast majority of military workers, of people in the military, would not be classified in one of the other industries. They would be classified in NAICS 92, in that particular government sector.

And they would not be included in here. However, there are some military workers that work as employees of companies that manufacturer for example,

military components. And those workers would be counted in that manufacturing industry where they are working.

But typically, I'd say the military workers and for that matter, all government employees, are excluded from the economic census data.

That actually makes the rankings in the District of Columbia look quite interesting. If we include government employees in those overall rankings the number one sector in DC might not be the sector that - it might not be professional sciences and technical services, if we counted government workers.

Any other questions in the chat, Greg?

Gregory Pewett: Not that - I'm not sure if I've missed any. And I don't know if you want to open up the phones to a couple of question. Totally up to you.

Andrew Hait: Yes. Yes, that would be great.

Operator, if you want to open up the phone lines for anybody who has any questions over the phone, that would be super.

Coordinator: Thank you. If you'd like to ask a question over the phone, please press Star followed by the number 1. Please make sure to unmute your phone and record your name at the prompt.

Again, that is Star 1 for any questions from the phone.

One moment please, while any questions come through.

I am showing no questions at this time.

Andrew Hait: Okay. So I do see someone did post a note here about a report that the Brookings Institution released. It looked at the top 100 metropolitan areas and looked at data on industry and occupation from the population census for 2010, looking at skilled workers. As many of you know, we publish data on workforce from a number of different directions at the Census Bureau.

Our demographic programs do include some information about industry and occupation. But those data are not nearly as detailed from an industry perspective as what you would see on the business side of the Census Bureau. And maybe more importantly, those demographic counted workers, are counted based upon where they live, not where they work.

The business data that we publish at Census is tabulated based upon where that business is physically located. So for example, just thinking about here in the DC area there are an awful lot of us that live in one state like Maryland, and work in Virginia or work in DC. So counting those workers based upon where they live versus where they work, does have quite a big impact in some geographies, on how the data are shown up.

So yes, that's a very kind of interesting way of looking at it. There are definitely some occupation data that if you're looking at truly interesting occupation data, there really are - the demographic data really is a better way of coming at that. The Bureau of Labor Statistics has a really great occupation data series.

But yes, there are definitely many different ways of looking at the workforce. We do have one program at Census that actually mashes up where workers live and where workers work. And it is presented in a tool called On the Map.

So for those of you who might be interested in looking at sort of commuting patterns of the workforce, that would be a great tool to do.

So (Jennifer) also asked a question - what is the best way to incorporate the Small Business Pulse Survey when we're talking about the economic census and other data? So the Small Business Pulse Survey as its name implies, looks at just a portion of the businesses that are covered by the economic census.

It is a sample survey that is of small businesses. The sample size is fairly small. And the definition of what constitutes a small business does vary industry to industry. They've got some great documentation.

So the best way to incorporate that data is once we have released our small business data, the establishment and firm size data from the economic census, where you see how some industries are very dominant by - dominated by small businesses and other industries not so much.

What I want to personally do is then match up the 2017 economic census small business data with the Small Business Pulse Survey data to see how have those small businesses fared in the last nine months during this pandemic. Those businesses that were not dominant in 2017 economic census, yes they might be impacted as seen by the Small Business Pulse Survey. But in the overall scheme of things, those small businesses were relatively fairly small in terms of the economy of their local area.

In other sectors of the US economy small businesses are not only numerous in number, but they are significant in impact. If we didn't count small daycare centers in the economic census they account for like 70% of the workforce

that work in daycare centers and that's not even counting the non-employers, the home-based daycare centers.

Those establishment and firm size data will be coming out on December 1st, or excuse me, December 2nd, and they are going to be an interesting look at the distribution of businesses by business size.

As I mentioned at the beginning of the webinar, I'm going to actually be doing a webinar specifically on the importance of and the definition of just what is a small business, on December 8th.

So if you want to check out our webinars page where you went to learn about today's webinar and where the webinar is going to be posted, that's where you'll see information about that NAPCS webinar that I'm doing on December 1st, and the small business size data webinar that I'm doing on December 8th. So yes, great, great, great question.

Okay. Well thank you very much. Again, I appreciate all the great questions.

If you didn't get your question answered today in the chat or over the phone, you see my email address here on the screen. You can tell I'm not shy. So please feel free to contact me.

I've also included my phone number and I am on LinkedIn. So if you are interested in connecting via LinkedIn, please feel free to reach out to me that way as well.

So thank you very much again, for taking time out of your busy schedules. And have a great afternoon.